Woking Urban District.

1904

ANNUAL REPORT

OF THE

Medical Officer of Health,

R. W. C. PIERCE, M.D., B.Sc. (Lond.)

Prepared in accordance with Section 14 of the Order of the Local Government Board, dated March 23, 1891, regulating the duties of Medical Officers of Health.

Woking:

"NEWS AND MAIL" PRINTING WORKS, CHERTSEY ROAD.

Chief Statistics.

Population.—Estimated to middle of 1904=16,810 (exclusive of Brookwood Asylum and Inkerman Barracks, about 2,500).

Birth Rate.—31·2 per 1,000 population; average of previous 10 years, 30·1. Rate for England and Wales, 1904=27·9.

Death Rate.—9·7 per 1,000 population; average of previous 10 years, 12·5. Rate for England and Wales, 1904=16·2.

Infantile Mortality.—(*i.e.*, deaths of infants under one year of age per 1,000 births registered) 99; average of previous 10 years, 115. Rate for England and Wales, 1904=146.

Zymotic Death Rate.—(*i.e.*, death rate from the seven principal Zymotic Diseases: Small Pox, Measles, Scarlet Fever, Whooping Cough, Diphtheria and Membranous Croup, Typhoid Fever and Diarrhœa) ·89. Rate for England and Wales, 1904=1·94.

Phthisis.—(Pulmonary Tuberculosis) 21 deaths, as against nine in 1903, and an average of 17 for the previous eight years.

Diseases of the Respiratory Organs.—21 deaths as against 24 in 1903, and 31 in 1902.

Infectious Diseases Notified.—117 as against 127, 85, and 161 in the three preceding years.

WOKING URBAN DISTRICT COUNCIL.

ANNUAL HEALTH REPORT
for 1904.

To the Chairman and Members of the Woking Urban District Council.

GENTLEMEN,

I have the honour to present to you my fourth Annual Report.

Statistics.

The population of the district at the middle of the year may be put down as approximately 16,810. This is exclusive of the population of Brookwood Asylum and Inkerman Barracks, which amount to about 2,500. With these there would be a total population of 19,310 at the middle of 1904. This population is only taken into account when calculating the *gross* death-rate, which is of little value. The Asylum population obviously should not be included in calculating the true death-rate of the district, as it is almost entirely a non-resident population, and only the deaths of the patients admitted from Woking are included in the nett deaths (See Table I). It is not so clear how the Barracks population should be treated. Its inclusion in the population for statistical purposes would appreciably lower the death-rate. All the deaths registered at the Barracks, however, are credited to the district, unlike the case of Brookwood Asylum and other institutions for the sick. From that point of view it would seem justifiable to include the Barracks population, but it has been omitted on the ground that it is not a normal or *average* population, and is subject to great variations. The women and children, and the civilian subordinates—totaling 235—have, however, been included.

The district is increasing in population more rapidly every year. The indications of the rate of increase, as given by the new houses for which water certificates were granted prior to occupation,

shew that the increase was greater last year than any year since 1896. The figures for 1904, and the three previous years were as follows:—

1901.	Number of water certificates granted			107
1902.	,,	,,	,,	110
1903.	,,	,,	,,	126
1904.	,,	,,	,,	192

The growth in population during 1904 took place chiefly in the Station Ward, as is shewn by the following table:—

Water Certificates, 1904.

Woking Station Ward	...	...	139
Village Ward	...	...	13
Sutton Ward ...	...	...	12
St. John's Ward	...	...	17
Knaphill Ward	...	...	11
			192

The populations of the separate Wards, estimated to the middle of the year, are given in Table II.

The estimated increase of population over that of 1903 is put down as 850. As the *natural* increase, *i.e.*, the excess of births over deaths was only 361, it follows that there were nearly 500 immigrants during the year.

The figures of the 1901 Census were as follows:—

Wards.	Acres.	Inhabited Houses.	Total Population.
Station and Maybury	771	1516	7850
Village and Mayford	2099	316	1696
Sutton and Bridley	3116	215	1065
Knaphill & Brookwood	1583	389	3123
St. John's & Goldsworth	1338	371	2510
	8907	2807	16244

The average number of persons per house (excluding the large Institutions) was five, the same as the average for the whole county.

At the time of the Census of 1891, the number of houses was 1586, and the total population 9,786.

The populations of the following Institutions are included in the above table:—

	Census 1901
Brookwood Asylum	1237
Inkerman Barracks	675
Mayford Schools	150
St. Peter's Home	105
Victoria Cottage Hospital ...	17

Birth Rate.

The rate for the year was 31·2, which is a little above the average for the previous 10 years (30·1), and considerably above the rate for England and Wales during 1904, viz., 27·9. A high birth-rate has a tendency to increase the death-rate, inasmuch as it contributes a large infant population, among which the death-rate is always very high; on the other hand, it indicates a considerable population of persons at ages for which the death-rate is low.

Death Rate.

This stood at the remarkably low figure of 9·7 per 1,000 population. In spite of the large increase in population there were 22 fewer deaths belonging to the district than in the previous year. The total number of deaths that occurred was 283. From this number has to be deducted the deaths of non-residents of Brookwood (142), and to it has to be added 23 deaths of Woking residents which occurred at the County Hospital, Workhouse Infirmary, and Isolation Hospital, making a nett total of 164. This figure, divided by the nett population, 16,810, (which does not include the Asylum and Barracks population) gives a rate of 9·7 per 1,000. This is in marked contrast with the rate for England and Wales (16·2), and even with the average rate for Woking (12·5). The English death-rate, which shewed a decline the preceding 4 years, again rose a little last year.

Death Rates England and Wales.	1900	1901	1902	1903	1904
	18·3	16·9	16·3	15·4	16·2

It is probable that the low figure for 1903 was due to the excessive rainfall, which contributed to the reduction chiefly by lowering the infantile mortality.

It is not to be expected that the low rate of 9·7 will be maintained. This could only approximately occur in the event of a continued annual influx of people to the same extent, and of the same character as last year. In any event, the rate is likely to prove exceptional, since its continuance for the *existing population* would mean that the average age at death would be over 100 years; and, as nearly one third of the deaths registered are those of infants under one year of age, it is plain that a very large immigration of young healthy adults would be required to counteract the effect of this mortality.

The low death-rate is nevertheless an extremely satisfactory feature, and, even if the average for 10 years (12.5) be taken, there is still a marked difference between it and the general English death-rate. The healthiness of the district may be accounted for by the following circumstances :—

(1) Sandy subsoil; (2) pure water supply; (3) extensive sewerage; (4) predominance of new houses built according to bye-laws, and absence of slums; (5) extent of district compared with population (density about two persons per acre); (6) large proportion of young population.

The causes of, and ages at, death are shewn in Table IV., which also gives the causes for the different wards. The decrease in the number of deaths as compared with last year (22), was partly due to fewer deaths from Cancer, Influenza, Septic Diseases, and also from various other causes not defined in the prescribed table. There was, on the other hand, a considerable increase in the number of deaths from Phthisis and Premature Birth.

The number of births and deaths in the separate wards is given in Table II, but the rates are not worked out, as the statistics for localities and short periods are unreliable and may be misleading. However, it may be noted that the St. John's Ward had more than a proper share of the deaths (see Tables II & IV), especially in the case of Cancer, Premature Births, Heart Disease, and Diarrhœa. The Sutton Ward had by far the smallest proportion of deaths, then comes the Village Ward, Knaphill Ward and finally the Station Ward, which last had a death rate of 10·4 per 1,000.

The Infantile Mortality.

The deaths of infants under one year of age account for nearly one-third of the total deaths registered. The mortality in comparison with the number of births is a little higher than in the two preceding years, but below the average for 10 years, and much below the figure for England and Wales. Of the 52 deaths recorded no less than 20 were from Premature Birth. Bronchitis and Diarrhœa accounted for many of the remainder (see Table IV).

Zymotic Death Rate.

There were four deaths from Diphtheria and Membranous Croup, three from Whooping Cough, one from Scarlet Fever and seven from Diarrhœa, which gives a zymotic death rate of ·89 per 1,000 population, as against 1·94 for England and Wales.

Phthisis.

There were 21 deaths from this disease, as against an average of 17 for the last five years. In view of its infectious character, it is worthy of consideration whether a system of notification (voluntary or compulsory) of this disease should not be instituted, so that special attention might be drawn to the sanitary condition of the dwelling, and disinfection of the room and bedding, &c., carried out on death or removal of the patient. It will be noticed that the deaths from this disease were four times as numerous as the deaths from notifiable diseases.

Cancer.

Seven deaths occurred from this disease as against an average of 14 for the previous four years.

Prevalence and Distribution of Infectious Disease.

See Table III.

The number of infectious diseases notified was 117, which is identical with the average for the previous five years. As the population has increased so largely, the number this year is smaller in proportion. A more correct mode of comparison is to take the zymotic case rate, *i.e.*, the number of cases notified per 1,000 population.

Year.	Number of Notifications.	Zymotic case rate.
1899	115	8·6
1900	98	7·0
1901	161	11·1
1902	85	5·6
1903	127	7·9
1904	117	6·9

Of the 117 notifications received, eight were of cases of Erysipelas at Brookwood Asylum and one was of a case of Scarlet Fever at the Barracks, which reduce the number properly belonging to the district to 108.

Twelve of the notifications were of cases of Erysipelas, eight of which, as above mentioned, were from Brookwood Asylum, and the remaining four from the Station Ward. The notification of this disease seems to serve no useful purpose as it is not infectious in the ordinary sense, but as it is one of the diseases included in the Act it must be notified and the cases must continue to swell the returns of infectious disease.

Of the 117 cases, 100 were cases of Scarlet Fever, Diphtheria, and Typhoid Fever, *i.e.*, were cases admissible into the Hospital, and of this number no fewer than 85 were so admitted, viz., 85 per cent. as against 75 per cent. the two previous years.

The numbers of cases notified and removed in the other districts in the Hospital area are given in the section dealing with the Isolation Hospital.

There were more cases of Scarlet Fever but fewer of Diphtheria than in the previous year. Although the numbers were larger than

is desirable, still there was nothing in the form of an epidemic. The vast majority of the cases were of a mild character, and 10 of them were of a very doubtful character. Only four of the 33 cases of Diphtheria and Membranous Croup were fatal, and one of the Scarlet Fever cases, and this was of a type rarely met with now-a-days, viz., Scarlatina Maligna. The patient who was only three years of age was already suffering from infantile paralysis when attacked by Scarlet Fever.

Among the causes contributing to the prevalence of infectious disease in the district may be mentioned the following :—

(1.) A large proportion of children of the most susceptible age, *i.e.*, under 10. For example, the census figures for Woking shew that 23 per cent. of the population were under 10, as against 18 per cent. for Guildford, and 19 per cent. for all the urban districts in the county.

(2.) Considerable immigration. Thus, the excess of births over deaths was only 360, whilst the increase in population was probably about 850. This means an influx from other districts of about 500 persons, which must necessarily largely increase the risk of introduction of infectious disease into the district. In fact, a considerable number of cases were found to be imported.

The above figure is probably an underestimate, as the population is also very migratory, which would allow of a greater number of changes than is represented by the above-mentioned increase in population.

(3.) The over-crowded condition of the Schools. The fact that large additions to the school accommodation are about to be carried out proves that the present provision is insufficient.

It is becoming increasingly apparent that school attendance is responsible for a large proportion of the infectious disease notified in children, and a considerable portion of the time of the Medical Officer of Health is taken up in visiting the schools to examine scholars and to make general inspection of the sanitary condition of the buildings. There is no doubt that the effect of the schools in spreading infectious disease can be greatly diminished by providing sufficient floor space per child, and adequate means of ventilation in the classroom. It is also essential that all articles

that are used in common by the children, such as slates, pencils, woolwork, &c., should be disinfected each time after being used, or steps taken to ensure that they do not pass from one to the other, since they are so liable to carry infection. Much can also be done by the school teachers by detecting the early signs of disease, and thereupon immediately excluding the children affected. When cases are known to have occurred amongst the school children, the head teachers frequently send me word that they have sent children home on suspicion, or that certain children are being kept at home on account of illness which they suspect to be of an infectious nature, and in those cases where there is reason to believe that a doctor has not been called in, I pay a visit to the home to examine the child. Several cases of infectious disease have been detected in this way. This procedure can hardly be carried out indiscriminately by the Medical Officer of Health, as he is liable to give offence by possibly interfering with the work of the general practitioners. It is, however, called for in cases where the parents are too poor or too careless to call in a doctor.

The effect of the schools in spreading infectious disease would also be diminished if a system were adopted of demanding a medical certificate as to the nature of the illness on account of which children may be absent from school. At any rate, in cases where children are known to be suffering from sore throat, which is characteristic of Diphtheria and Scarlet Fever, a certificate should be produced before the child returns to school. It has frequently happened that children who have only been absent a few days have during that time gone through the acute stage of a mild attack of the disease and returned to school whilst very infectious. In one instance two children of one family were kept at home for nearly three weeks without being medically attended, and were sent back to school with their skin peeling after Scarlet Fever.

I have little doubt that in the future increased attention will be paid to the schools in the matter of arresting the spread of infectious disease, by the institution of a system of frequent medical inspection of children at the schools and at their homes.

Goldsworth School was closed for three weeks in October, and the infants' department of Maybury School for the same period in November. The classes of Maybury School which met in the Primitive Methodist Chapel were discontinued for a fortnight in October. In each of these cases there was at once a marked diminution in the number of cases notified.

It was decided to send a request that the Sunday Schools attended by the children should be closed for a corresponding period, and this was acceded to.

There can be no question but that the closing of elementary schools always produces a distinct effect on the prevalence of infectious disease, especially of Scarlet Fever and Diphtheria. This is strikingly shewn every year by the great drop in the number of cases notified in London during the summer holidays. If this is the case in London where many of the children, when away from school, congregate to play in courts and alleys, it must be more so in the case of an open place like Woking, where there are no slums. The explanation is, of course, that the liability to contract infection is much less in the open air than in schoolrooms, especially if these are at all overcrowded. School closure, however, is a drastic method of stamping out infectious disease amongst the scholars, and should only be adopted after other methods, such as the method of exclusion of particular scholars, have failed. In this connection it may be mentioned that the Board of Education now make no allowance for the loss of attendances caused by the exclusion of scholars from infected houses, and only take into account the loss caused by the closing of the entire school. This, I think, is to be deplored, as it may sometimes be sufficient to exclude the children attending a particular class, or those coming from a particular locality, without interfering with the educational work of the schools to the extent of entirely closing them. On the other hand, where the number of children excluded, added to those already absent from other causes, materially lowers the attendance, the teachers aver that the interference with the educational work of the school is greater than if the school were closed for a period, and in such cases the interests of the school should be considered in deciding what steps to take.

A notable feature about the distribution of the cases of infectious disease during the year was the freedom of the outlying districts The cases were practically confined to the Station Ward. Thus in the Village Ward the only case notified was one of Puerperal Fever; in Sutton Ward, only one of Puerperal Fever, and one imported case of Scarlet Fever, and five cases each in St. John's and Knaphill Wards.

Examination of Swabs.

Fifty-nine swabs from suspicious cases of Diphtheria, sent to me for bacterial examination, were examined during the year, 21 giving

a positive, and 38 a negative result. Seven of these were from patients who were nursed at home, and were sent in order to ensure freedom from infection before they were allowed to mix with others.

Three specimens from suspicious cases of Typhoid Fever were also examined, but all gave a negative result.

Small Pox.

No cases occurred in the district. Notice was received from a Port Sanitary Authority that a passenger from an infected vessel was proceeding to Woking. In such cases the "contacts" are kept under observation for a fortnight.

Scarlet Fever.

Sixty-seven cases were reported, of which 58 were in the Station Ward; six were doubtful cases. The cases were in the great majority of instances of a very mild nature, and only one was fatal. Sixty of the patients were removed to Hospital.

In eight instances two cases occurred in one house, and in two instances three cases in the same house.

Seven of the cases were imported.

In one instance it is probable that the infection was brought from school and communicated to two others by a sister who had had Scarlet Fever some years previously, but on this occasion only developed a sore throat. The susceptibility of children to the disease varies greatly and it is more than likely that the disease is often spread by children who are only slightly susceptible, i.e., children who only develop the symtoms and especially the rash to a slight extent and so escape observation and isolation.

Several of the earlier cases occurred at Horsell Moor in children who attended Goldsworth School. These children were excluded from school for a time with a view to keeping the infection from the school. This step however proved ineffectual, so that the school was closed from October 6th to the 28th with good effect. The infection had meanwhile spread to the children attending Maybury School and in spite of great efforts to stamp out the disease by frequent visits to the school to examine suspicious

cases &c., it was found necessary to close the infants' department from November 11th to December 2nd, and this sufficed in entirely arresting the spread of the disease in the Maybury School area.

One of the imported cases was interesting inasmuch as the child was in all probability infected by travelling in a cab, which a Scarlet Fever patient, who was supposed to have been free from infection, had used the same day.

Another of the imported cases was a young man who was notified in London, but in spite of this, and of the warning of the medical attendant, travelled down by train to Woking, whilst in an infectious condition. Proceedings were taken against him before the magistrates, under Sec. 126 of the Public Health Act, and he was fined 40 shillings.

Diphtheria and Membranous Croup.

Thirty cases of Diphtheria and three of Membranous Croup were reported, of which three were doubtful. All occurred in the Station Ward with the exception of one case at Brookwood and one in the St. John's Ward. Twenty-five were removed to Hospital and only three were fatal. In four instances two cases occurred in the same house, and in another instance four in one house.

Five cases occurred in four houses in the Mount Hermon District. There had been no intercommunication between the persons affected, who strangely enough were all women. The occurrence of cases under these circumstances in such a healthy locality was very puzzling. At the close of the previous year also a few cases had been reported and their origin could not be traced with any certainty, although there was some ground for suspecting the milk supply. In the second series of cases the milk supply came from the same farm, although not through the same dealer. It should be mentioned however, that there was an interval of three months between the two sets of cases. Investigations at the farm, and a bacterial examination of the milk produced entirely negative results. It is worth noting that, on a subsequent visit to the farm, Mr. Wild, the Council's Veterinary Inspector, reported that some of the cows were suffering from cracked teats, so-called false cowpox—which has in some instances been associated with outbreaks of Diphtheria. This affection however was not apparent at the time the cases occurred.

Complaints were again made of occasional bad smells in the vicinity of the infected houses in the Mount Hermon district, and although the house drains were thoroughly tested and the sewers inspected, no fault of any kind could be found. The Council however decided to carry out the suggestion I made the previous year as to the provision of a ventilating shaft at the highest point of the sewer in the infected area, as well as others in the vicinity.

The persistence of the infection was very marked in the case of one house in this area. The first case in the house was notified in March, the second in September, and the third and fourth in October.

The St. John's Ward case, which proved fatal, was that of a child who was infected by a relative on a visit from London, and who was suffering from an undetected attack of Diphtheria.

The manner in which the disease is frequently kept alive was exemplified in two cases at Maybury Hill. A child was notified from an isolated cottage where there was nothing whatever to account for the attack. The patient was an only child and did not attend school. Further enquiries however shewed that the child had paid one visit to a cottage where there had been illness. On visiting this cottage I found that one of the children had had an attack of Diphtheria, but had not been medically attended or notified.

Typhoid Fever.

Only one case was notified and this one was of a very doubtful character. The district may therefore be said to have been completely free from this disease during the year, which is an excellent testimony to its sanitary condition.

Three specimens from suspicious cases sent to me by medical men were examined during the year, but all three gave a negative result.

Puerperal Fever.

Four cases were notified.

(1.) A case in Sutton Ward. The attack followed a very difficult labour with complications.

(2.) A case at Knaphill. The woman was entirely attended by an old midwife who has now given up practising.

(3.) and (4.) Occurred in the Station and Village Wards respectively, the latter ending fatally. Both women were attended by the midwife who has figured in previous Annual Reports. The second woman was confined by her after the onset in the first of an illness which should have been suspected as being Puerperal Fever. An inquest was held into the cause of death and the midwife was censured for not exercising greater care in going from one case to another.

Representations had already been made by the Council to the Central Midwives' Board in respect of the excessive number of Puerperal cases which had occurred in the practice of this midwife, which in their opinion proved that it was undesirable she should continue to act as such. On the invitation of the Board a further report was sent to them during the year which included the above mentioned cases, the result of which was that the midwife's application for enrollment under the new Act was refused. She will therefore be debarred from calling herself a midwife after March 31st of this year.

Midwives' Act, 1902.

A request was received from the County Council (who are the Local Supervising Authority under the Act) that the District Council should allow their Medical Officer of Health to perform the following duties, under the Act, on their behalf, viz :—

(1) To receive from Midwife notice of death of mother or child.

(2) To receive from Midwife notice of a still-birth.

(3) To receive from Midwife notice of sending for medical help.

(4) To inspect Midwife's case-book, her bag of appliances, her place of residence, and her mode of practice, and such other analogous duties as the County Council may hereafter prescribe.

This, the District Council, in common with all the other Surrey Authorities, consented to do. The most important of these duties, viz., the inspection of the midwife's appliances, and mode of practice, had already been carried out in the case of the midwives in whose practice a case of Puerperal Fever had occurred. Only three midwives in Woking are qualified to be enrolled.

The County Council were asked to delegate their other duties under the Act—such as the suspension of Midwives—to the District Council, but they have decided to retain them in their own hands.

ISOLATION HOSPITAL.

Guildford, Godalming, and Woking Joint Hospital Board.

The number of cases admitted from the district into the Woodbridge Hospital, as well as the localities from which they were removed, are shewn in Table III.

The figures for the separate districts comprised in the Joint Hospital area, were as follows :—

	Admissions	Scarlet Fever	Diphtheria	Typhoid	Deaths
Guildford Rural	52	27	24	1	0
Guildford Borough	12	3	8	1	0
Godalming	5	3	2	0	0
Woking	85	60	24	1	4 (3 Diph. 1 S. F.)
Totals	154	93	58	3	4

The totals for the preceding years were as follows:—

1901	...	...	293
1902	...	...	190
1903	...	...	161

It will be seen that the percentage of deaths is very low ; 5% in the case of Diphtheria, and about 1% in the case of Scarlet Fever.

Twelve patients on admission were found not to be suffering from the diseases for which they were sent in, viz. :—six sent in as Diphtheria, five as Scarlet Fever, and one as Typhoid. Four of these patients came from the Guildford Rural District, seven from Woking, and one from the Borough of Guildford. In the case of Diphtheria patients, swabs are in most instances previously sent to me for diagnosis, and it is significant that this confirmatory test was not applied in the six cases mentioned. Neither was a specimen sent for examination from the supposed case of Typhoid Fever, for, if this had been done, the case would probably not have been notified and removed.

The Hospital contains provision for 37 patients, allowing the Local Government Board's requirement of 144 square feet per bed. It is proposed to build a new Pavilion for Scarlet Fever patients, as the existing accommodation has been found insufficient; as many as 50 patients having been treated at one time during the autumn in recent years.

A Local Government Board Enquiry was held in October into the Hospital Board's application for sanction to borrow £3,650 for the building of the New Block, and for the enlargement of the Administrative Block and Stable accommodation. This sanction was obtained, and tenders have been invited for the work according to the plans prepared by Mr. E. L. Lunn.

It is sometimes suggested that an Observation Ward should be maintained at the Hospital, for the reception of suspicious cases. This, at first sight, would appear to be very desirable. It would, however, entail the erection of an additional block, and an increase in the staff, and it would immensely increase the difficulty of management which is peculiar to Hospitals for infectious diseases. The better plan would be to keep the patients under observation at home for a day or so, for there are few houses in which isolation cannot be maintained for that short period of time.

Small-Pox Hospital,

Whitmoor Common.

No cases were admitted during the year. The Hospital is fully equipped, and when empty is under the charge of a caretaker and his wife, who keep everything in readiness for the reception of patients.

The enlargement of one of the wards was completed during the year, so that there is now ample accommodation for ten patients. There is room for several more beds, and in emergencies there are tents ready to be put up in the grounds.

The following Table gives the number of cases of Scarlet Fever, Diphtheria and Typhoid Fever notified; the case rate, *i.e.*, the number of these cases per 1,000 of the population; and also the percentage removed to Hospital from each of the constituent districts of the Hospital Board's area during the years 1900-1904.

Year.	WOKING.			GUILDFORD RURAL DISTRICT.			GUILDFORD.			GODALMING.		
	Number.	Case Rate.	Percentage Removed.	Number.	Case Rate.	Percentage Removed.	Number.	Case Rate.	Percentage Removed.	Number.	Case Rate.	Percentage Removed.
1900	80	5·7	80	64	3·0	72	39	2·5	56	50	5·7	80
1901	137	9·5	82	112	5·2	69	97	6·1	83	22	2·5	54
1902	70	4·6	68	87	4·0	79	71	4·4	60	27	3·1	74
1903	96	6·0	75	90	4·1	53	40	2·4	82	9	1·0	88
1904	100	5·9	85	71	3·2	73	18	1·1	66	9	1·0	55
Av'ges	96	6·3	78	85	3·9	69	53	3·3	69	23	2·7	70

Water Supply.

The Water Company still draw all their supply from their wells in the chalk at Dapdune near Guildford, West Clandon and West Horsley. The supply has been plentiful during the year, so that they have not found it necessary to draw a supply from the Thames, the works for which are ready for use when required.

There were no analyses of the Company's water made during the year. The sources of supply not being open to any suspicion of the danger of contamination, frequent analyses are hardly called for. Nevertheless, periodical examinations should be made, especially in view of the fact that pollution of the water in the mains themselves has been known to occur in other districts. Samples ought therefore to be taken successively from different parts of the district.

New mains were laid by the Company in the district to the extent of 1,717 yards. One hundred and ninety-two new houses were connected with the mains during the year; and no less than 84 houses previously supplied from shallow wells were also connected. Of these 84 houses, four were in the Station Ward, 22 in the Village Ward, 34 in Sutton Ward, three in St. John's Ward, and 21 in the Knaphill Ward. In the case of 10 wells at Westfield, Kingfield, and Little Housen, it was found necessary to have the water analysed. All of these, except one, were heavily polluted, and some of them could only be described as imperfectly purified sewage. It is marvellous how the people survived drinking such stuff. One can only suggest that the otherwise healthy conditions under which they live counteract the effect of bad water, which, in itself, must have a prejudicial effect on health, although the effects may not be striking. Should, however, a case of Typhoid Fever occur in one of these cottages, the infection might easily, owing to the poor protection against the admission of surface water, get into the well with disastrous effects.

One sample of water was analysed from a new well which was to form the supply of a new pair of cottages in an outlying part. This was the only instance in which well water formed the source of supply to new houses.

The cottages on St. John's Lye are still without a drinkable water supply, owing to the difficulty in obtaining the leave of the lord of the manor to lay a pipe across the Common. The problem has now been solved by the Council acquiring the manorial rights over St. John's Lye, and the main will soon be laid.

Sewerage and Sewage Disposal.

This section has again been kindly contributed by the Surveyor,

Mr. G. J. Wooldridge.

Sewers.

The total length of Sewers under the control of the Council is 35⅜ miles. No additional Sewers have been constructed during the year.

The following houses have been connected with the Sewers during the year :—

Station Ward	...	173
Village and Mayford Ward ...	...	32
St. John's and Goldsworth Ward	...	17
Knaphill and Brookwood Ward	...	38
Total	...	260

The area of land available for the purification of the sewage is about 36 acres.

The District Council have recently acquired from Lord Onslow a further 25 acres, which is now being laid out and underdrained to a depth of 4 ft. 6 in. It is expected to have this additional land ready for the treatment of sewage by the end of February.

Although the system of sludge pressing has been abandoned, no difficulty has been experienced in disposing of the sludge, which has been considerably reduced by the alterations to the tanks which have recently been carried out.

Scavenging.

House refuse is now removed weekly from all houses in the district, excepting the Sutton and Bridley Ward and a few isolated houses in the Mayford and Knaphill districts. About 4,000 loads of refuse are collected annually.

Building Bye-laws.

There was a considerable increase in the number of houses erected in the district during the year compared with the previous one, and the average for the past eleven years.

Year.	Houses. Plans Approved	Houses. Erected	Stables, Additions & other Buildings Approved	Stables, Additions & other Buildings Erected	Public Buildings Erected	Roads Constructed.
1893	79	62	29	28	3	...
1894	136	98	43	42	1	6
1895	244	135	24	23	...	9
1896	288	228	41	41	2	6
1897	218	137	60	52	...	2
1898	129	82	42	37	3	3
1899	141	100	47	44	1	...
1900	108	86	22	21	1	...
1901	207	114	54	42	4	4
1902	...	126	...	17	...	...
1903	220	140	30	29	...	4
1904	164	185	35	35	1	1

The houses erected were distributed as follows :

Station Ward	141
Village Ward	16
St. John's Ward	9
Knaphill Ward	6
Sutton and Bridley Ward...	13
Total ...	185

Summary of other proceedings and applications of the Sanitary Acts.

(1.) Factory and Workshop Act, 1901.

This Act has added considerably to the work of the sanitary department, as is shewn by the number of inspections carried out during the year.

Special attention has been given to bakehouses. Although they are for the most part well kept, yet unsatisfactory features were often met with, which sufficiently proved the necessity for frequent inspection. The defects were chiefly want of cleanliness, and, in two or three instances, insufficient light.

There is now no underground bakehouse in the district.

The following table is now required by the Home Office in each annual report of the Medical Officer of Health :—

Factories, Workshops, Laundries, Workplaces and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of Inspections.	Number of Written Notices.
Workshops ... ... (Including Workshop Laundries.)	189	14
Homeworkers' Premises	3	...
Total	192	14

2.—DEFECTS FOUND.

Particulars.	No. of Defects Found.	No. of Defects Remedied.
Nuisances under the Public Health Acts :—		
Want of cleanliness	30	29
Other nuisances	9	8
Sanitary accommodation—Insufficient ... (Sec 22 Public Health Amendment Act adopted.)	2	1
Offences under the Factory and Workshop Act :—		
Breach of special sanitary requirements for bakehouses (SS. 97 to 100) ..	1	1
Total	42	39

3.—OTHER MATTERS.

Class.	Number of Lists.	Number of Outworkers.
Homework—Lists of Outworkers (S. 107) : -		
Lists received	2	4
Workshops on the Register (S. 131) at the end of 1904.	Number.	
Bakehouses	26	
Other Workshops	74	
Total number of workshops on Register	100	

(2.) Dairies, Cowsheds and Milkshops.

There are at present only 12 registered cowkeepers in the district and these have received special attention. I have myself paid 27 visits to the farms during the year.

In one large dairyfarm where the sheds were old and becoming dilapidated, improvements were slowly carried out during the year in the matter of drainage and repairing of the floors.

One excellent cowshed has the single defect of having the stalls too long, so that the manure does not always fall into the channel provided for the purpose. This results in fouling of the hind quarters when the animals lie down. There is nothing in the Regulations dealing with this, and no doubt it would be difficult, owing to the varying size of the cows, to lay down a limit for the length of stalls. They should, however, be made as short as possible, and there can be little doubt that attention to this detail would prevent most of the present unnecessary pollution of milk with manure.

Since the unfortunate outbreak of sore throat in 1903, the cowkeepers have been more fully alive to the necesssity of care and cleanliness in the production and handling of milk. In some of the sheds the cows' udders and teats are systematically washed before milking and in all of them a bucket of water and a cloth are taken into the sheds for the purpose of washing the hands, and those udders which are obviously dirty.

As, however, it is impracticable to supervise at all times the production of milk in the sheds, it is probable that unnecessary pollution of the milk will continue to take place until the same principle is adopted for its prevention as obtains in the Food and Drugs Act in the matter of adulteration with water, viz.; examination of samples taken from the retailers. If a standard of comparative bacterial purity were adopted, cowkeepers would be compelled to take the necessary steps to avoid the introduction of filth into the milk.

As a result of the outbreak of sore throat, a letter was sent to the County Council in January, asking them to extend the range of their analyses under the Sale of Food and Drugs Act, so as to include the detection of pollution similar to that which gave rise to the outbreak. The Council, however, could not see their way to do this, which from a public health point of view is to be regretted. The only analyses hitherto carried out in the case of milk is for the detection of added water, which offence is not to be compared in its power for harm with the danger arising from the presence of organisms of suppuration, and tuberculosis.

Mr. Wild was again appointed Veterinary Inspector to the Couucil, and was good enough to extend his inspection so as to take account of the general condition of the udders and teats, in addition to the examination for detection of Tuberculosis. Mr. Wild made two inspections during the year and reported as follows:

Reports of Veterinary Inspector to the Council.

Report, June 9th, 1904.

GENTLEMEN,

I have examined the cows of registered cowkeepers in this district. I find no case of either generalised Tuberculosis or Tubercular Mastitis. In one farm I found several cows affected with eruptive disease of the teats. I advised the owner to dress the teats twice daily with antiseptic ointment to prevent contamination of the milk ; these directions were carried out.

On several farms I found cases of Mastitis with milk containing pus. I advised the owner as to treatment and pointed out that great care must be taken not to allow any of the secretions of these unhealthy udders to pass into the milk pail.

I remain, Gentlemen,

Yours faithfully,

ALFRED C. WILD, M.R.C.V.S.

Report, November 30th, 1904.

GENTLEMEN,

I beg to report that I have finished my half-yearly inspection of cows with a view of detecting any animal suffering from generalised Tuberculosis or Tubercular Mastitis. I am pleased to say, in this respect, the cows appear to be healthy and free from manifestation of this disease.

I also find very few cases of defective udders, only about three per cent. In one case the cow had lost two quarters. Instruction was given to owner not to use or sell the milk for human food, which he was quite willing to do, as he was calf-rearing and sold very little milk. On one farm I found a cow with a very bad udder (Sloughing Mastitis); she was only partly isolated. I wrote to owner pointing out the danger there was in keeping an animal in this state anywhere near milking cows, and advised him to completely isolate the animal; fortunately she was dry, so there was no need for the milkers to touch her.

The number of cows inspected was 190.

ALFRED C. WILD, M.R.C.V.S.

(3.) Slaughter-houses.

There are now ten Slaughter-houses in the district, five registered and five under annual license, two new ones having been erected during the year. They are frequently visited by the Sanitary Inspector and myself, and it has been found that the Regulations have been fairly well carried out.

(4.) House Accommodation.

Four cottages were reported to the Council, under the Housing of the Working Classes Act, as being unfit for human habitation. These were situated at Kingfield Green (2), Boundary Road (1), and Saunder's Lane (1). The owners in each case decided they were not worth repairing. so that the tenants were given notice to leave, and in one instance the cottage was at once pulled down.

In the case of other cottages at Kingfield and Mayford, which were becoming dilapidated, we met the owner on the spot to discuss the required improvements.

A systematic inspection was carried out, by the Sanitary Inspector and myself, of the old property at Kingfield, Westfield, Prey Heath, and the outlying parts of Knaphill.

A systematic inspection was also carried out of the older property in Cherry Street, Poole Road, and Oaks Road, and several notices were served to improve their sanitary condition. In the case of 5 cottages in Cherry Street, which were not quite bad enough to report under the Housing of the Working Classes Act, I had already met the owner there, and he undertook to put the necessary work in hand forthwith.

(5.) Building Bye-Laws.

A sub-committee went fully into the matter of revision of the existing bye-laws, and a draft set was forwarded to the Local Government Board for their sanction. I was requested at the first meeting of the sub-committee to submit my views on those points in the bye-laws which most directly concern the public health.

(6.) Nuisances.

A complaint was received in February of the nuisance arising from the unloading of Refuse from a barge at St. John's, but it was only of a

temporary nature. This refuse, as well as a large quantity which is carted at certain periods of the year from the stations of Woking and Brookwood, was intended for the brickyards near Knaphill. The introduction of refuse matter from other districts is much to be deplored, and one can only suggest that, at any rate for the present, the house refuse of the district itself should be used in these brickyards.

A complaint was received of the nuisance arising from a fish-frying business in the Station Ward. As a result, a new hood was provided over the pans, to carry off the fumes into the flue. By this means, and the use of the best frying oil, these places are rendered as unobjectionable as it is possible to make them.

Meteorology.

Meteorological Observations at 'Lindisaye,' Horsell, in 1904.

Rainfall. Rain (including measurable **Snow 0·19** inches) fell on 162 days, equal to 22·74 inches, being 1·30 inches less than the average fall for the last 11 years. The heaviest monthly fall was 3·06 inches in May, the driest month being June, with a fall of 0·65 inches. The greatest daily fall was 0·88 inches on December 6th.

Snow fell on February 17th, 28th and 29th, March 1st, 2nd and 30th, November 22nd and 23rd, and December 8th and 11th.

Sleet fell on February 25th and 26th, and December 11th.

Hail fell on February 15th, March 29th, and December 8th.

Thunder Storms occurred on March 29th, April 13th, May 27th, July 30th, August 4th, and September 24th.

Rather High Winds came on January 30th, 31st, February 9th, and 13th, November 8th, December 28th and 29th.

Fogs were very prevalent, and occurred on January 1st, 4th, and 23rd, March 12th, 14th and 15th, September 26th, 27th, 28th, 29th, and 30th. October 4th, 15th, 19th, 20th, 25th, 27th and 29th, November 13th, 14th, 15th and 17th, December 19th, 21st, 22nd and 23rd, 24th, 25th, 26th and 27th.

Barometric Pressure. The readings (corrected and reduced) of **Barometer** were, **Highest, 30·61** inches on January 22nd, **Lowest, 28·94** inches, on February 17th; the mean of daily readings for the year **29·95** inches; the daily mean for the last 11 years being **29·94** inches.

Temperature (shade). The **maximum reading** of **Thermometer** was 88° on August 4th, the **mean of maximum** readings for year being **57·60°**. The **minimum reading** was **19°** on November 27th, the **mean of minimum** readings for year being **41·53°**. The **mean temperature** for the year was **49·56°**, the average for the last 11 years being **50·02°**.

Rainfall at 'Lindisaye,' Horsell, during 1904.

Jan.	2·95	May	3·06	Sept.	1·50
Feb.	2·83	June	0·65	Oct.	1·80
Mar.	1·29	July	1·71	Nov.	1·56
Apr.	1·24	Aug.	1·62	Dec.	2·53
		Total	22·74		

My best thanks are due to Mr. Horncastle, for again writing the above report, and also to Mr. Wooldridge for writing the section dealing with sewerage and scavenging.

I am, Gentlemen,

Your obedient Servant,

R. W. C. PIERCE.

OAKLANDS,

WOODBRIDGE ROAD,

GUILDFORD.

February, 1905.

TABLE I.—Vital Statistics of whole District during 1904 and previous Years.

Year	Population estimated to Middle of each Year	Births		Total Deaths Registered in the District				Total Deaths in Public Institutions in the District	Deaths of Non-residents registe'd in Public Institutions in the District	Deaths of Residents registered in Public Institutions beyond the District	Nett Deaths at all Ages belonging to the District	
				Under 1 year of age		At all ages						
		Number	Rate*	Number	Rate per 1,000 Births registe'd	Number	Rate*				Number	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	9660	274	28·4	34	124						105	10·7
1895	10120	289	30·0	45	155						134	14·2
1896	11075	342	35·4	35	102						130	11·8
1897	11645	376	32·2	40	104	245	21·0	105	101	4	134	11·1
1898	12715	372	29·3	46	126	264	20·7	113	102	11	162	12·7
1899	13350	394	29·4	52	135	256	19·1	115	99	16	189	14·1
1900	14000	432	30·8	49	113	299	19·9	134	117	17	199	14·2
1901	14440	418	28·9	44	105	286	17·5	128	121	30	195	13·5
1902	15155	394	26·0	38	96	266	15·5	120	107	9	168	11·1
1903	15960	490	30·7	44	89	285	15 7	129	118	19	186	11·6
Average for years 1894-1903	12812	377	30·1	43	115	271	18·5	120	109	15	159	12·5
1904	16810†	525	31·2	52	99	283	14 7	151	142	23	164	9·7

Area of District in Acres (exclusive of area covered by water), 8,882. Total population at all ages, 16,244 (including Barracks and Asylum).
Number of inhabited houses, 2,807. Average number of persons per house, 5·8 (5·0 excluding Public Institutions) : at Census of 1901.

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

† Exclusive of population of Brookwood Asylum, about 1,500, and Inkerman Barracks, about 1,000 ; total, 2,500.

TABLE II.—Vital Statistics of separate Localities in 1904 and previous years.

Names of Localities	Station & Maybury				Village & Mayford				Sutton & Bridley				St. John's & Goldsworth				Knaphill & Brookwood			
Year	Population estimated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population estimated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population estimated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population estimated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population estimated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year
1901 ..	7950	...	110	29	1700	...	27	7	1065	...	14	2	1835	...	27	2	1890	...	17	4
1902 ...	8400	238	113	27	1755	39	18	4	1100	13	6	0	1870	48	12	1	2030	56	19	6
1903 ...	8950	282	97	25	1805	64	19	0	1140	11	12	5	1900	61	31	5	2165	72	27	9
1904 ...	9535	296	100	30	1860	63	12	3	1175	15	5	2	1935	77	27	11	2305	74	20	6

TABLE III.—Cases of Infectious Disease notified during the Year 1904.

Notifiable Disease.	Cases notified in whole District.							Total Cases notified in each Locality.							No. of Cases removed to Hospital from each Locality.				
	At all ages.	At Ages—Years.						1 Station and Maybury.	2 Village and Mayford.	3 Sutton and Bridley.	4 Goldsworth and St. John's.	5 Knaphill and Brookwood.	6 Brookwood Asylum.	7 Inkerman Barracks.	1 Station and Maybury.	2 Village and Mayford.	3 Sutton and Bridley.	4 Goldsworth and St. John's.	5 Knaphill and Brookwood.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 & upwards.												
Small-pox ...																			
Cholera ...																			
Diphtheria ...	30		4	16	7	3		28			1	1			21			1	1
Membran's croup	3		1	2				3							1				
Erysipelas ...	12				1	7	4	4					8						
Scarlet fever ...	67		20	43	3	1		58		1	4	3		1	54			3	3
Typhus fever ...																			
Enteric fever ...	1			1				1							1				
Relapsing fever																			
Continued fever																			
Puerperal fever	4					4		1	1	1		1							
Plague																			
Totals ...	117		25	62	11	15	4	95	1	2	5	5	8	1	77			4	4

Isolation Hospital—Woodbridge, Guildford.

TABLE IV.—Causes of, and Ages at, Death during Year 1904.

Causes of Death.	Deaths at the subjoined ages of "Residents," whether occurring in or beyond the District.							Deaths at all ages of "Residents" belonging to Localities, whether occurring in or beyond the District.					Total Deaths whether of Residents or non "Residents" in Public Institutions in the District.
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Station and Maybury.	Village and Mayford.	Sutton and Bridley.	St. John's and Goldsworth.	Knaphill and Brookwood.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Small-pox													
Measles													
Scarlet Fever	1		1					1					
Whooping-cough	3	2	1					3					
Diphtheria and Membranous Croup	4		2	2				3				1	
Croup	1			1				1					
Fever (Typhus													
Fever (Enteric													
Fever (Other continued ...													
Epidemic influenza ...	2				1	1		2					
Cholera													
Plague													

Puerperal Fever	1					1			1					
Erysipelas														1
Other Septic Diseases ...	3			1		1	1	3						2
Phthisis (Pulmonary Tuberculosis)	21	1	2	2	1	15		13	3		1	4		22
Other Tubercular Diseases ...	9	2	4	1	1	1		8			1			1
Cancer, Malignant Disease ...	7				1	3	3	3		1	3			1
Bronchitis	12	6	1				5	6	3		1	2		2
Pneumonia	6	2	1			3		6						13
Pleurisy														
Other Diseases of Respiratory Organs	3					2	1	1		1		1		4
Alcoholism, Cirrhosis of Liver														1
Venereal Diseases														
Premature Birth	20	20						9	1	2	7	1		
Diseases and Accidents of Parturition														
Heart Diseases	13	1			2	5	5	6	1		5	1		12
Accidents	3		1	1			1	3						2
Suicides	1					1		1						
All other causes	45	9	3		2	15	16	28	3	1	6	7		90
All causes	164	52	16	8	8	48	32	100	12	5	27	20		151

Summary of Work done by the Sanitary Inspector, Mr. J. H. Ablett, Assoc. San. Inst.,

DURING THE YEAR ENDING DECEMBER 31, 1904.

Number of	Premises inspected and re-inspected	1825
,,	Preliminary Notices served	367
,,	Statutory Notices served	43
,,	Sanitary improvements carried out as the result of notices served	410

Dwellings.

Number of	Filthy Houses cleansed and whitewashed ...	46
,,	Rooms provided with additional means of light and ventilation	7
,,	Houses at which repairs to plastering, brickwork, or woodwork have been carried out... ...	6
,,	Defective roofs made watertight	15
,,	Houses provided with eaves and downspouts, or the existing spouting repaired	11
,,	Houses put into thorough repair after notice ...	5
,,	Houses where overcrowding was abated after notice	3

Drainage.

Number of	Premises re-drained and connected to sewer ...	27
,,	,, drained to cesspool	2
,,	Yard drains found obstructed, opened and cleansed	29
,,	Defective drains repaired	10
,,	Additional means of ventilation provided ...	5

Water Closets, Privies and Ashpits.

Number of	Pail privies abolished, and water closets with flushing cisterns provided	22
,,	Cesspit privies abolished, and w.c's. substituted	2
,,	Additional privies provided, or existing defective privies reconstructed	7
,,	Choked water-closets opened and cleansed ...	9
,,	Flushing apparatus provided to existing water-closets	4

Keeping of Animals, &c.

Nuisances arising from the keeping of swine abated ...	4
,, ,, ,, ,, fowls abated ...	3
,, ,, accumulation of refuse & manure ..	23
Number of receptacles provided for manure	9
,, Sanitary dustbins provided	28

Disinfection.

Number of Houses disinfected after Scarlet Fever and Diphtheria	80

Water Supply.

Number of New houses certified for occupation under section 6 of the Public Health Water Act, 1878 ...	192
,, New houses to which water was laid on after notice	64
,, Wells re-constructed	5
,, Wells cleansed	4
,, Samples taken for Analysis	11

Dairies and Cowsheds.

Notices to Limewash cowsheds	22
,, Provide additional lighting	4
,, Repair defective floors	5
,, Repair or provide additional drainage	5
,, Repair defective roof	1
,, Remove accumulation	1

Workshops, including Bakehouses.

Number of visits paid during year	150
,, Notices to limewash	30
,, ,, to provide additional w.c. accommodation	1
,, ,, ,, various sanitary improvements	9

Slaughterhouses.

Number of notices to remedy defects	2